

ABSTRACT

At least one network device that moves storage blocks based upon a session layer or higher protocol set is employed to facilitate communication between at least one host and at least one target storage device. The at least one network device may
5 include a server and a switch. Transactions related to data storage access are expressed in a non-network protocol and transmitted via a network protocol data unit across at least a portion of the network by employing encapsulation. An adapter card associated with the data storage unit is employed to extract the non-network protocol transaction. Multiple, mirrored data storage units that are separated by relatively large
10 physical distance may be employed to reduce the likelihood of catastrophic data loss due to an event such as a fire. Further, READ transactions may be facilitated by preloading data storage units with READ metadata for subsequent transmission to a client device to enable expedited access to data stored on the data storage units.